This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Amended): A method of connecting an integrated optical waveguide circuit component with an optical fiber array, said method comprising the steps of:

providing an integrated optical waveguide circuit component having N input and output waveguides ~~including a subset of~~ and at least one u-waveguide structure, wherein the at least one u-waveguide structure defines one of the input waveguides and one of the output waveguides;

providing an optical fiber array having an array of M optical fibers, said optical fibers each having a coupling end for optical coupling to ~~some set/subset of respective individual corresponding waveguide ports of said circuit component, some set/subset~~ at least a portion of the input waveguides and output waveguides of said integrated optical waveguide circuit component, wherein at least a portion of said optical fibers ~~terminating~~ terminate with an individual optical fiber terminal end;

positioning said optical fiber array adjacent to said integrated optical waveguide circuit component[[,]] so that a plurality of photons emitted from ~~optical fiber array ports~~ the coupling end of at least one of the optical fibers are coupled into the ~~respective individual corresponding~~ at least one u-waveguide ~~coupling regions on~~ structure of said ~~optical~~ integrated optical waveguide circuit component and coupled back into the ~~corresponding~~ coupling end of at least one of the optical fibers of the optical fiber array adjacent to said integrated optical waveguide circuit component;

~~means for~~ adjusting the relevant position of said optical fiber array to said integrated optical waveguide circuit component so that ~~the~~ a sensed value representative of the total optical power of the photons coupled back into the coupling end of the at least one optical fiber is maximized; and

~~means for~~ securing said position of said optical fiber array to said

integrated optical waveguide circuit component.

Claim 2 (Original): The method of claim 1, wherein providing an optical fiber array further comprises providing an optical fiber array held in an optical fiber array holder, wherein said coupling ends of the optical fibers are contained by said optical fiber array holder.

Claim 3 (Amended): The method of claim [[2]] 1, wherein said optical fiber array is comprised of an optical fiber array ribbon.

Claim 4 (Original): The method of claim 3, wherein said optical fiber terminal ends are contained by said optical fiber array ribbon.

Claim 5 (Amended): The method of claim [[2]] 1, wherein ~~means of~~ securing said position of said optical fiber array to said circuit component comprises adhering said optical fiber array holder to said circuit component so as to maintain the maximized sensed value.

Claim 6 (Original): The method of claim 1, wherein M and N are at least two.

Claim 7 (Amended): The method of claim 1, wherein said integrated optical waveguide circuit component comprises a planar substrate.

Claim 8 (Amended): The method of claim 1, wherein said integrated optical waveguide circuit component comprises optical wavelength processing devices.

Claim 9 (Amended): The method of claim 1, wherein adjusting the relevant position comprises adjusting the relevant position in ~~two translations~~ at least one of a first translation direction, a second translation direction, and ~~one~~ a rotation direction.

Claim 10 (Original): The method of claim 1, wherein the relevant position of said optical fiber array to said circuit component is adjusted with an auto-alignment system.

Claim 11 (Amended): The method of claim [[1]] 10, wherein said sensed value representative of the total optical power is inputted into said auto-alignment system.

Claim 12 (Amended): The method of claim 11, wherein said auto-alignment system adjusts the relevant position of said optical fiber array to said circuit component in at least ~~two translations~~ at least one of a first translation

direction, a second translation direction and ~~at least one~~ a rotation direction based on the sensed value representative of the total optical power that is inputted in the auto-alignment system.

Claim 13 (New): A method of connecting an integrated optical waveguide circuit component with an optical fiber array, wherein said integrated optical waveguide circuit component has N input and output waveguides and at least one u-waveguide structure, the at least one u-waveguide structure defining one of the input waveguides and one of the output waveguides, and wherein said optical fiber array has an array of M optical fibers, said optical fibers each having a coupling end for optical coupling to at least a portion of the input waveguides and output waveguides of said integrated optical waveguide circuit component, said method comprising the steps of:

positioning said optical fiber array adjacent to said integrated optical waveguide circuit component so that a plurality of photons emitted from the coupling end of at least one of the optical fibers are coupled into the at least one u-waveguide structure of said integrated optical waveguide circuit component and coupled back into the coupling end of at least one of the optical fibers of the optical fiber array adjacent to said integrated optical waveguide circuit component;

adjusting the relevant position of said optical fiber array to said integrated optical waveguide circuit component so that ~~the~~ a sensed value representative of the total optical power of the photons coupled back into the coupling end of the at least one optical fiber is maximized.

Claim 14 (New): The method of claim 13, wherein providing an optical fiber array further comprises providing an optical fiber array held in an optical fiber array holder, wherein said coupling ends of the optical fibers are contained by said optical fiber array holder.

Claim 15 (New): The method of claim 13, wherein said optical fiber array is comprised of an optical fiber array ribbon.

Claim 16 (New): The method of claim 13, wherein securing said position of said optical fiber array to said circuit component comprises adhering said optical fiber array holder to said circuit component so as to maintain the maximized sensed value.

Claim 17 (New): The method of claim 13, wherein said integrated optical waveguide circuit component comprises optical wavelength processing devices.

Claim 18 (New): The method of claim 13, wherein adjusting the relevant position comprises adjusting the relevant position in at least one of a first translation direction, a second translation direction, and a rotation direction.

Claim 19 (New): The method of claim 13, wherein the relevant position of said optical fiber array to said circuit component is adjusted with an auto-alignment system.

Claim 20 (New): The method of claim 19, wherein said sensed value representative of the total optical power is inputted into said auto-alignment system.